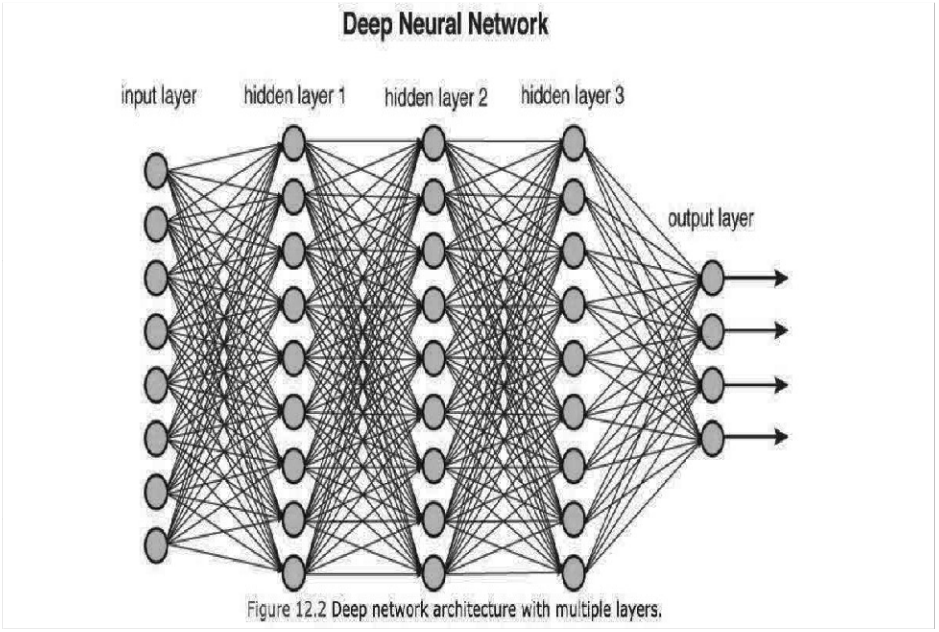
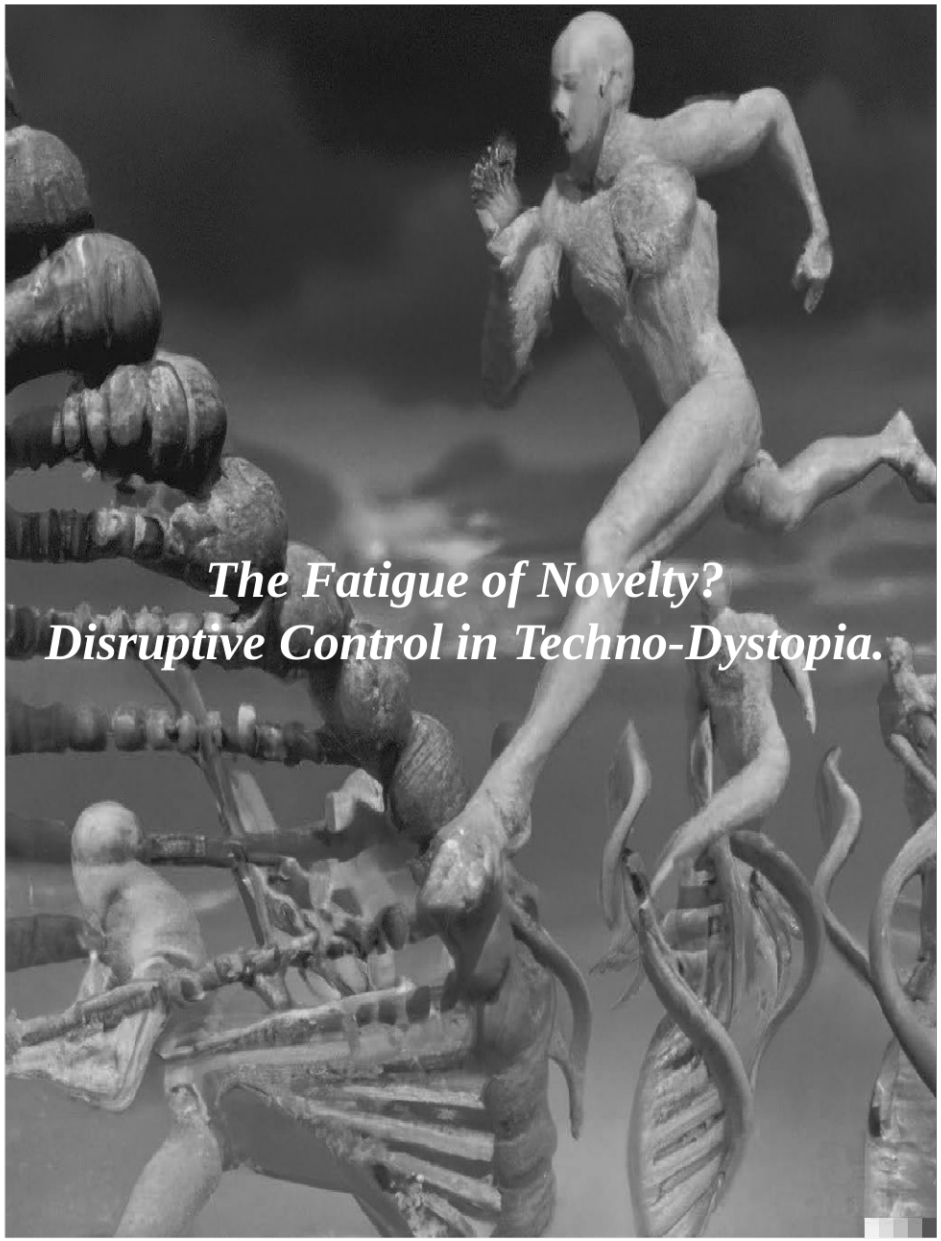


Figure 12.2 Deep network architecture with multiple layers.



An early January 2023 paper published in Nature found that the percentage of published peer-reviewed scientific articles labeled “disruptive” is dramatically decreasing.

“The average CD index, a measure of disruptiveness ranging from -1(least) to 1(most), declined by more than 90% between 1945 and 2010 for research manuscripts and by more than 78% from 1980 to 2010 for patents.” (‘Disruptive’ science has declined — and no one knows why. Nature 613, 225 (2023)).

Data from millions of manuscripts show that, compared with the mid-twentieth century, research done in the 2000s was much more likely to incrementally push science forward than to veer off in a new direction and render previous work obsolete.

If they have not already, the forces of capital are quickly reckoning with the truth that the realm of science and technology is not the infinitly depthed well they hoped it to be. The university system has artificially inflated the cost of an undergraduate degree, simultaneously pushing so-called STEM (Science Technology Engineering & Math) fields, where much like other for degrees, there is nowhere viable for these graduates to use their knowledge and skills. This pushes more people to extend their studies in graduate programs, flooding the job market further with competent technologists. Much like with any other profession, this increases competition in order to lower salaries and increase profit. The competition amongst scientists is collaqually called “publish or perish”. That is, publish papers, no matter their quality, or leave a field you have devoted upwards of a decade to.

The religion of categorization that is science aims to entrench itself as the arbiter of ontological certainty, and as such, the driver of the “progress” of human civilization. Science is used to make coherent, interpretible, discrite, and predictable the infinitely chaotic universe we inhabit. Within this simplification, information is lost in the name of coherence and domination. Science and technology become unlikely bedpartners as the myth of infinite growth predicating capital seeks to maximize the ability of humans to exploit resources of the natural universe. Capitalism is concerned with profit and efficiency, science on the otherhand is nothing but a costly, time consuming , and often fruitless process. However, capitalists dump money into research in the hopes of extending the capabilities of human resource extraction. Natural resource extraction in the

Resources:
~Always Use TOR!~ (https://www.torproject.org/), no smartphones.

warriorup.noblogs.org

unravel.noblogs.org

csrc.link

actforfree.noblogs.org

scenes.noblogs.org

phlanticap.noblogs.org

https://scenes.noblogs.org/post/2023/10/26/how-to-have-a-fun-night-to-forget-zine/

Suggested Reading:

The Technological Society - Jaques Ellul

Against Method - Paul Feyerabend

Against The Gendered Nightmare - Baedan

Braiding Sweetgrass - Robin Wall Kimmerer

The Structure of Scientific Revolutions - Thomas Kuhn

forms of oil, lumber, coal, metals, gems, etc is continually shown to have devestating effects on the natural world, creating increasingly uninhabitable conditions for humans on earth. Resource extraction is shifting into the microscale and smaller as the above resources become less tenable to extract. The new resources inhabit the realm of biotechnology and computational technology, as well as their marriages.

Long past the dawn of transgenics, the molecular scissors that is the CRISPR-CAS9 system allows for easy genetic alterations, to the point where the first transgenic children (twins) have been birthed. Embryos were modified in vitro by He Jiankui's lab at SUStech in Shenzhen, China to eliminate a gene called CCR5, promoting resistance to HIV, smallpox, and cholera. The embryo's were transplanted into a human uterus to be brought to term. Proteins can be designed to modulate bodily function using open source software, their movements simulated, synthesized in yeast or bacteria media . Alphafold, the AI algorithm from Google has "solved" 200 million protein structures, expanding the known structural proteome by a factor of 10k. The so-called protein folding "problem" is a common test for AI algorithms predictive power. Meta (formerly Facebook), built a competeing model predicting 600 million structures. Cataloging at the individual microscale is also increasingly common, as people send their DNA to the likes of ancestry.com to be sequence and build a genetic lineage for them, who knows who has access to this genetic information.

This is not presented to alarmestly stoke fears of biotechnology from the perspective of some form of "pure" life and living, plainly, the resources of our very bodies are a new fronteir for capital extraction. This expansion into the cybernetic realm is the continuance of civilizations colonial desires into the (sub)molecular level. After our labor, our ever diminishing time and energy, is continually extracted from us for the privilege of barely scraping together an existence, the forces of capital seek to extrude things even more fundemental from our wretched bodies.

David Graeber addressed scientific stagnation a decade ago in his piece "Of Flying Cars and the Declining Rate of Profit" for The Baffler. Graeber juxtaposes the techno semi-utopia of the Jetsons, the impressive technology of Star Trek, and other science fiction fed to children of the 60's. He locates this pop-

ular projection in the dramatic increase in technological advancement brought about by the Cold War. However, dreams of advanced technology eventually petered out, along with the actual pace of technological advancement. As Graeber puts it, refering to the new visual effects in the new Star Wars films of the time;

“They [people in 50's] thought we’d be doing this kind of thing by now. Not just figuring out more sophisticated ways to simulate it.”

Graeber is correct in naming technologies of simulation being one of the few research areas improving. AI technologies of survailence are begining to be used to identify people (even in real time). Ones such company is Clearview AI, a facial recognition company with ties to far-right figures Ton-That and Chuck Johnson (The Far-Right Helped Create The World's Most Powerful Facial Recognition Technology. Huffpost 2020), with Ray Kelly (former NYPD commissioner) on its board, has contracts with many institutions, such as DHS fusion centers. Thousands of Clearview searches have been performed by law enforcement in hopes of identifying suspects. Another software is Amazon’s Rekognition, which has been demonstrated to unsurprisingly exhibit racial and gender biases in its identification. Augmented reality (AR) and generative models are increasingly gaining steam, with models such as DALLE and chatGPT able to generate images and text, as well as spoofing visuals and voices, which can have potentially deadly ramifications. Quantum computing has the potential to dramatically increase the speed of the above computations.

Graeber further points to a similiar phenomena in scientific publishing as the paper cited in the beginning of this piece;

“It was right around 1970 when the increase in the number of scientific papers published in the world—a figure that had doubled every fifteen years since, roughly, 1685—began leveling off.”

He notes;

“that existing patterns of technological development would lead to social upheaval, and that we needed to guide technological development in directions that did not challenge existing structures of authority—echoed in the corridors of power.”

and further comments on systematizing technological stagnation by quoting;

“...But if you want to minimize the possibility of unexpected breakthroughs, tell those same people they will receive no resources at all unless they spend the bulk of their time competing against each other to convince you they know in advance what they are going to discover.”

This reality of science in stagnation, of scientific “progress” being controlled so as to hinder disruption speaks to the crux of how science is done. Where does the money to do this time consuming and often fraught process… the government and capitalists. This fact alone drives what research can get done. An article in CEPR by Claudia Steinwender in 2019 cited the DOD’s R&D budget at ~$80 billion, while the NSF and NIH dole out $8.5 billion and $44 billion, respectively. With this in mind, it is obvious that the science that gets done, at least in the US, is that which benefits the colonial empire of the US. This piece is much too long already to go into any appreciable detail of science and technologies importance to the colonial project of the US, but science has always been a bedrock for this project and the appeal to ontological certainty of the method has underpinned the foundational white supremacy of the US. Science is not a utilitarian process through which human life is improved. Technological advancements are controlled as to not disrupt civilizations construction and to drive colonization. This speaks to both the colonization of land and people by the state and power in step with capitals attempted colonization of every imaginable resource in the quest of infinite profit. The world that technologists want is one where AI tracks each individuals moves at every time, every identifying factor about people is cataloged in some database. Through the failed “Metaverse” project, they aim to meld the digital escapism of simulation with the world of wage labor, expanding capitalist dystopia into the cybernetic dream realm. They dream of robot police and drivers. They desire a totally controlled and surveiled world, safe for them and the wealth they’ve stolen, one in which they do not have to interact with the “underclasses” of people. The world in which we live is already a technocratic dystopia, built on the false promise of techno-utopia for all.